इंटरनेट मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

"जानने का अधिकार, जीने का अधिकार"
Mazdoor Kisan Shakti Sangathan
"The Right to Information, The Right to Live"

"पुराने को छोड नये के तरफ"
Jawaharlal Nehru
"Step Out From the Old to the New"

IS 9993 (1981): Grading for DHUPA kernel for oil milling
[FAD 13: Oils and Oilseeds]

"ज्ञान से एक नये भारत का निर्माण"
Satyanarayan Gangaram Pitroda
"Invent a New India Using Knowledge"

Act Number 22 of 2005
The Indian Parliament
RIGHT TO INFORMATION

Made Available By
Public.Resource.Org

"ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है"
Bhartṛhari—Nītiśatakam
"Knowledge is such a treasure which cannot be stolen"

BLANK PAGE

BRUTUM FULMEN

IGNORANTIA JURIS NON EXCUSAT

PROTECTED BY COPYRIGHT

IS : 9993 - 1981
(Reaffirmed 2000)

Indian Standard

GRADING FOR *DHUPA* KERNELS FOR OIL MILLING

UDC 633·855·637 *DHUPA* : 620·168

© *Copyright* 1982

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Gr 2

Price Rs 5·00 *April* 1982

Indian Standard

GRADING FOR *DHUPA* KERNELS FOR OIL MILLING

Oils and Oilseeds Sectional Committee, CAFDC 5

Chairman	*Representing*
PROF M. M. CHAKRABARTY	Oil Technologists' Association of India, Kanpur
Members	
PROF A. C. GUPTA (*Alternate* to Prof M. M. Chakrabarty)	
SHRI S. N. AGARWAL	Central Organization for Oil Industry and Trade, Bombay
SHRI H. P. GUPTA (*Alternate*)	
AGRICULTURAL MARKETING ADVISER TO THE GOVERNMENT OF INDIA	Directorate of Marketing and Inspection, Nagpur
SHRI T. V. MATHEW (*Alternate*)	
SHRI J. A. ASHTAPUTRE	Ministry of Defence (DGI)
SHRI P. N. AGARWAL (*Alternate*)	
SHRI N. K. BAJAJ	Indian Vanaspati Producers' Association, New Delhi
DR B. P. BALIGA	Tata Oil Mills Co Ltd, Bombay
DR N. L. MURTY (*Alternate*)	
SHRI M. A. BHATT	Swastik Household and Industrial Products Ltd, Bombay
SHRI C. R. KRISHNAMURTHY (*Alternate*)	
DR N. V. BRINGI	Hindustan Lever Ltd, Bombay
SHRI K. BALAKRISHNAN (*Alternate*)	
SHRI D. S. CHADHA	Central Committee for Food Standards (Ministry of Health and Family Welfare), New Delhi
SHRIMATI DEBI MUKHERJEE (*Alternate*)	
SHRI N. C. CHATTERJEE	National Test House, Calcutta
SHRI S. P. GUPTA	Kusum Products Ltd, Rishra
SHRI A. R. N. KULU (*Alternate*)	
SHRI B. V. KANTAK	Godrej Soaps Ltd, Bombay
SHRI M. S. THAKUR (*Alternate*)	
SHRI S. KRISHNAMURTHY	Khadi and Village Industries Commission, Bombay
SHRI V. LAKSHMIKANTHAN (*Alternate*)	
DR G. LAKSHMINARAYANA	Regional Research Laboratory (CSIR), Hyderabad
DR A. S. PANTULU (*Alternate*)	
DR S. K. MUKHERJEE	Indian Agricultural Research Institute (ICAR), New Delhi

(*Continued on page* 2)

© *Copyright* 1982
INDIAN STANDARDS INSTITUTION
This publication is protected under the *Indian Copyright Act* (XIV of 1957) and reproduction in whole or in part by any means except with written permission of the publisher shall be deemed to be an infringement of copyright under the said Act.

(*Continued from page* 1)

Members	*Representing*
SHRI J. P. PATEL	Italab Pvt Ltd, Bombay
SHRI J. C. DEV (*Alternate* I)	
SHRI S. S. HONAVAR (*Alternate* II)	
DR N. S. RAJAGOPAL	Directorate of Vanaspati, Vegetable Oils and Fats (Ministry of Civil Supplies), New Delhi
DR M. K. KUNDU (*Alternate*)	
SHRI S. RAMASWAMY	Directorate General of Technical Development, New Delhi
SHRI S. N. AGGARWAL (*Alternate*)	
SHRI P. RAMDAS	Central Warehousing Corporation, New Delhi
SHRI A. S. SAMPATH KUMAR (*Alternate*)	
DR Y. R. RAO	Regional Research Laboratory (CSIR), Bhubaneshwar
DR M. BAPUJI (*Alternate*)	
REPRESENTATIVE	Indian Council of Medical Research, New Delhi
DR B. R. ROY	Central Food Laboratory, Calcutta
SHRI P. K. SEN	Vanaspati Manufacturers' Association of India, Bombay
SHRI RAJ KAPILA (*Alternate*)	
SHRI S. C. SINGHAL	D. C. M. Chemical Works, New Delhi
SHRI V. K. BANSAL (*Alternate*)	
SHRI G. V. SIRUR	Solvent Extractors' Association of India, Bombay
SHRI L. KRISHAN KUMAR (*Alternate*)	
DR (SMT) KAMLA SOHNIE	Consumer Guidance Society of India, Bombay
SHRI S. D. THIRUMALA RAO	Oil Technological Research Institute, Anantapur
SHRI D. ATCHYUTA RAMAYYA (*Alternate*)	
SHRI M. D. WASNIK	Directorate of Oilseeds Development, Hyderabad
DR HARI BHAGWAN, Director (Chem)	Director General, ISI (*Ex-officio Member*)

Secretaries

SHRI R. K. SINGH
Deputy Director (Chem), ISI

SHRI M. MUKHOPADHYAY
Deputy Director (Chem), ISI

Oilseeds Subcommittee, CAFDC 5 : 5

Members	
AGRICULTURAL MARKETING ADVISER TO THE GOVERNMENT OF INDIA	Directorate of Marketing & Inspection (Ministry of Agriculture), Nagpur
SHRI T. V. MATHEW (*Alternate*)	
DR I. J. ANAND	Indian Agricultural Research Institute, New Delhi
SHRI S. S. BAL	National Seeds Corporation Ltd, New Delhi
DR K. S. R. K. SHANKARA RAO (*Alternate*)	

(*Continued on page* 6)

Indian Standard

GRADING FOR *DHUPA* KERNELS FOR OIL MILLING

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 16 November 1981 after the draft finalized by the Oils and Oilseeds Sectional Committee had been approved by the Chemical Division Council and the Agricultural and Food Products Division Council.

0.2 *DHUPA* kernels are obtained from seed of *DHUPA* (*Vateria indica* Linn.) tree. *DHUPA* trees grow mostly in moist evergreen forests in the Western Ghats and foothills from North Kanara (Karnataka) to Kerala through the *Ghat* forests of South Kanara, Coorg, Malabar and Coimbatore. It is also occasionally found in deciduous forests adjoining rivers in the aforementioned areas. Apart from the *Ghats*, *DHUPA* trees are also found on the Deccan Plateau and along the Arabian sea-coast, the altitudinal range being from 60 to 1 220 metres. *DHUPA* trees have also been extensively planted as an avenue tree in parts of Karnataka and Kerala States. The flowering time is from January to March and fruits ripen from May to July. The fruits are fleshy, wingless, about 50 to 60 mm long and contain one large seed.

0.3 *DHUPA* kernels contain 16 to 25 percent of a pale-yellow fat having tallow-like consistency, which turns white on standing. The fat is known by a number of names, such as Malabar tallow, Piney tallow and *DHUPA* tallow. The fat derived from *DHUPA* kernels is suitable for soap and candle making. The refined fat is suitable for edible purpose. It has good potential for use as cocoa butter substitute or extender after proper processing. It has also good prospects for use in yarn sizing.

0.4 The requirements for fat obtained from *DHUPA* kernels is covered in IS:8879-1978*.

0.5 In the preparation of this standard substantial assistance has been derived from the data supplied by Khadi and Village Industries Commission, Bombay which is thankfully acknowledged.

0.6 This standard contains clause **5.1** which calls for an agreement between the purchaser and the supplier.

---

*Specification for *DHUPA* fat.

0.7 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS:2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes requirements and methods of sampling and test for grading of *DHUPA* kernels for oil milling.

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given in **2** of IS:3579-1966† shall apply.

3. GRADES

3.1 The material shall be of two grades, namely, Grade 1 and Grade 2.

4. REQUIREMENTS

4.1 The material shall be obtained from the seeds of the fruit borne on the *DHUPA* (*Vateria indica* Linn.) tree.

4.2 The material shall not emit any foul odour.

4.3 The material shall also comply with the requirements given in Table 1.

5. PACKING

5.1 The material shall be packed in clean, dry, sound, single, new or unmended B-Twill bags or as agreed to between the purchaser and the supplier.

6. MARKING

6.1 The bags containing the material shall be marked with the following particulars:

a) Name and grade of the material,
b) Net mass of the material in bags,
c) The year of the crop, and
d) The source of supply.

---

*Rules for rounding off numerical values (*revised*).

†Methods of test for oilseeds.

TABLE 1 REQUIREMENTS FOR *DHUPA* KERNELS FOR OIL MILLING

(*Clauses* 4.3 *and* 8.1)

SL No.	CHARACTERISTIC	REQUIREMENT FOR		METHOD OF TEST, REF TO CL NO. IN IS : 3579-1966*
		Grade 1	Grade 2	
(1)	(2)	(3)	(4)	(5)
i)	Impurities, percent by mass, *Max*	2	5	4
ii)	Moisture content, percent by mass, *Max*	8	12	5.1
iii)	Oil content, percent by mass, *Min*	22	16	5.2
iv)	Acid value of extracted fat, *Max*	10	20	5.3

*Methods of test for oilseeds.

7. SAMPLING

7.1 Representative samples of the material shall be drawn as prescribed in IS : 4115-1967*.

8. TESTS

8.1 Tests shall be carried out according to the methods prescribed in IS : 3579-1966†. Reference to the relevant clauses of that standard is given in col 5 of Table 1.

8.2 Quality of Reagents — Unless specified otherwise, pure chemicals and distilled water (*see* IS : 1070-1977‡) shall be used in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

---

*Methods for sampling of oilseeds.

†Methods of test for oilseeds.

‡Specification for water for general laboratory use (*second revision*).

(*Continued from page* 2)

Members	*Representing*
Shri Hotchand Bhojumal	The Central Organization for Oil Industry and Trade, Bombay
Shri B. K. Swaika (*Alternate*)	
Shri N. K. Gulati	Inspector General of Forests, New Delhi
Shri B. K. Sharma (*Alternate*)	
Dr S. K. Jain	Botanical Survey of India, Calcutta
Dr V. Mudgal (*Alternate*)	
Dr G. Lakshminarayana	Regional Research Laboratory (CSIR), Hyderabad
Shri V. Krishna Moorthi (*Alternate*)	
Shri R. R. Mussadi	East India Oil Millers' Association, Calcutta
Shri H. P. Gupta (*Alternate*)	
Dr G. B. Rajale	The Tata Oil Mills Co Ltd, Bombay
Dr G. S. Sabnis (*Alternate*)	
Shri P. Ramdas	Central Warehousing Corporation, New Delhi
Shri A. S. Sampath Kumar (*Alternate*)	
Dr M. V. Reddy	Indian Council of Agricultural Research, New Delhi
Dr N. Sen	Hindustan Lever Ltd, Bombay
Shri K. Balakrishnan (*Alternate*)	
Shri M. Kantharaj Urs	Central Food Technological Research Institute (CSIR), Mysore
Dr D. P. Sen (*Alternate*)	
Shri M. D. Wasnik	Directorate of Oilseeds Development (Ministry of Agriculture), Hyderabad
Dr R. N. Mohonty (*Alternate*)	

Panel for Drafting Specifications for Oilseeds, CAFDC 5:5:1

Convener	
Shri V. Lakshmikanthan	Khadi & Village Industries Commission, Bombay

Members	
Agricultural Marketing Adviser to The Government of India	Directorate of Marketing & Inspection (Ministry of Agriculture), Nagpur
Shri T. V. Mathew (*Alternate*)	
Shri D. S. Chadha	Central Committee for Food Standards (Ministry of Health and Family Welfare), New Delhi
Shrimati Debi Mukherjee (*Alternate*)	
Dr G. Lakshminarayana	Regional Research Laboratory (CSIR), Hyderabad
Representative	Swastik Household & Industrial Products Ltd, Bombay
Shri M. D. Wasnik	Directorate of Oilseeds Development, Hyderabad
Dr R. N. Mohonty (*Alternate*)	